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Robert W.D. Veitch

Copenhagen Business School, rv.inf@cbs.dk

Ioanna Constantiou

Brunel University, Copenhagen, Denmark, ic.inf@cbs.dk

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TO PIRATE OR PURCHASE? A MODEL OF INDIVIDUAL DECISIONS FOR DIGITAL PRODUCT ACQUISITION

Veitch, Robert W. D., Department of IT Management, Copenhagen Business School,
Howitzvej 60, 2000 Frederiksberg, Denmark, rv.inf@cbs.dk

Constantiou, Ioanna, Department of IT Management, Copenhagen Business School,
Howitzvej 60, 2000 Frederiksberg, Denmark, ic.inf@cbs.dk

Abstract

Ten years after the fall of Napster, digital piracy remains an issue for media and software companies. While scholars often treat digital piracy as a behaviour that needs to be prevented or punished, the user's decision about how to acquire a digital product involves more than the piracy option. However, the decision between legal alternatives and piracy has received limited attention. Moreover, existing models used in piracy research emphasize some elements of the acquisition decision, but disregard other important influences. This has led to a body of literature that is fragmented and has decontextualised digital piracy by not examining how available legal alternatives are evaluated. This paper makes an attempt to address these issues and presents a model of the user's digital product acquisition decision in the context of piracy, integrating elements of previous models to reflect the decision's complexity. Specifically, we use a consumer decision-making perspective as a framework for integrating elements of previous models used in digital piracy research, including those from social psychology, business ethics, criminology, and consumer behaviour. In the model, we depict the acquisition decision as being influenced by the user's product desire, price perceptions, perceived risks, internal regulators of behaviour, resources, and product availability. Theoretical and empirical evidence from the existing literature is drawn upon in order to provide support for the elements of the model. The paper concludes with an outline for future research and a brief discussion of its contribution.

Keywords: Digital piracy, consumer behaviour, decision-making, Internet

1 INTRODUCTION

The technological advances of the information age have given society an unheralded access to products and services, democratised their distribution, and facilitated their consumption. As products and services increasingly become produced, distributed, and consumed digitally, the piracy of digital products presents a very real challenge for firms producing and distributing digital products (Taylor et al. 2009). These developments have disrupted business models and challenged laws designed for the physical world, which are frequently being revealed as inadequate for a digital environment. However, for users these changes have expanded the range of options available to acquire the products they desire, making it almost as easy to acquire something through piracy as legally.

The piracy of digital products is alarmingly common. For example, it was estimated that in 2008 that 41 percent of the software installed worldwide was pirated, up from 38 percent in 2007 (BSA 2009). The monetary value of this practice is estimated to be substantial: around \$US50 billion annually. Though few contend that software producers benefit from piracy, the industry did manage year-on-year growth of 14 percent in 2008. However, this growth has not been mirrored elsewhere. Global sales of recorded music fell by around 30 per cent from 2004 to 2009 (IFPI 2010). This drop is largely attributed to the impact of digital piracy, with investigations indicating that over half of university students in the US download music without paying for it (Levin et al. 2004; Madden and Rainie 2005). These figures are indicative of a broader phenomenon where piracy rates have begun to undermine the commercial foundations of some of the industries producing digital products, which have struggled to adapt to the conditions of the digital age. In this paper, digital piracy refers to the unauthorised or illegal acquisition of digital products, where acquisition covers both downloading products and streaming content, in addition to other forms of acquisition not conducted over the Internet, such as copying files from friends. Piracy behaviour refers to the activities that users engage in while conducting digital piracy.

Responding to the changing environment, scholars seeking to explain and predict digital piracy applied theories and models from social psychology, criminology, and business ethics, primarily using intention frameworks as foundations for their research. While we acknowledge the importance of this type of research to explain the individual determinants of piracy behaviour, we contend that this body of research is limited in two important ways: it is fragmented and it has decontextualised digital piracy. Its fragmentation is a result of separate disciplinary streams of piracy research using models that emphasize some elements of the acquisition decision, but disregarding other important influences. For example, d'Astous, Colbert and Montpetit's (2005) research uses an expanded version of Ajzen's (1991) theory of planned behaviour to investigate intentions to engage in music piracy, but disregards important variables like the price and availability of legal alternatives. Decontextualisation is also observed as for the most part research has not examined how legal alternatives are evaluated against piracy. Despite the insights provided by the existing body of research, its fragmentation and decontextualisation of the problem have left unanswered questions and practitioners continuing to struggle with how to respond to digital piracy.

In this paper, we take the above-mentioned limitations as a point of departure and propose a new model that addresses these limitations. To address fragmentation, our model is integrative, and builds on key elements of existing models and introduces new concepts from consumer behaviour. To address decontextualisation, we conceptualise digital piracy as just one option in the user decision about how to acquire a digital product; a decision which also includes the option of legal acquisition and non-acquisition. To be clear, this is not a decision about the adoption and use of new services or technology, covered appropriately by other models in the IS literature (e.g., TAM, UTAUT), but rather a decision influenced by technology which provides alternative modes of product acquisition. The decision about how to acquire a digital product is unique to its technological context, and in contrast to other circumstances, it may be influenced by broad variety of factors, including social, ethical, legal, economic and product considerations.

The rest of the paper is structured as follows. The following section offers an overview of the existing empirical research, focusing primarily on studies of the antecedents of digital piracy. After outlining

the key limitations of the literature, a new research model is described. Theoretical and empirical evidence from existing literature is drawn upon to provide support for each element of the model. The paper concludes with an outline for future research and a brief discussion of its contribution to the IS literature.

2 DIGITAL PRODUCTS AND THE ANTECEDENTS OF DIGITAL PIRACY

Before presenting the model, it is worthwhile considering which characteristics of digital products make them prone to piracy, and what previous research tells us about digital piracy's antecedents.

2.1 Digital Products

Digital products are goods which have a digital form and content, and so require a physical device in order to be consumed (Stryszowski and Scorpecci 2009). This covers a broad variety of products including software applications, video games, films and television programmes, music and other audio products, and digital documents such as books, magazines and newspapers. These products are consumed using devices such as computers, gaming consoles, mobile phones, tablets, e-readers, and portable music players.

Digital products have a number of common characteristics that make them prone to piracy. As experience goods, a user needs to experience a product before he or she can ascertain its utility (Chellappa and Shivendu 2005), and so product sampling is common before acquisition. In economic terms, they are considered club goods in that they are non-rival, as one's consumption of a product does not prevent another from consuming it, and excludable, as it is possible to prevent people who have not paid for a product from using it (Gopal and Sanders 1997). As information goods, they are costly to produce but cheap to reproduce, with low marginal costs and where reproduction does not result in any loss of quality (Shapiro and Varian 1999). Finally, ownership and use of digital products is typically controlled through intellectual property laws and protected by copyrights and patents (Towse 2005).

While digital products are typically treated as intellectual property, what is seen as infringing activity and what is considered to be fair use varies across countries (Nill and Schultz 2009; Stryszowski and Scorpecci 2009). For example, in the US it is illegal to circumvent technological measures that control access to a copyrighted work, whereas in the EU it is only illegal to do so if a person knowingly commits the circumvention (Blythe 2006). Such differences in intellectual property laws present challenges for researchers wishing to investigate the phenomenon, and it is necessary to acknowledge that there are minor differences as to what constitutes digital piracy across the globe.

2.2 Existing Research and Its Limitations

Research on the piracy of digital products has been reported in the academic literature for over 20 years (e.g., Cohen and Cornwell 1989), though most has emerged over the last decade and focused on piracy facilitated by the Internet. Scholars seeking to explain and predict digital piracy have applied theories and models from across the social sciences, including social psychology, criminology, business ethics and marketing, primarily using intention frameworks as foundations for their research. The resulting body of research has evolved into separate lines with each providing unique insights, and which can be differentiated according to the theories and variables used. A brief overview of this research follows.

Research informed by social psychology provides some support for the applicability of Ajzen's (1985) theory of planned behaviour (TPB) in the context of piracy, where subjective norms, attitudes, and perceived behavioural control (one's belief in his or her ability to perform a behaviour) influence piracy behaviours via intentions (e.g., d'Astous et al. 2005). Similar support has been found for extensions of TPB, such as Perugini and Bagozzi's (2001) model of goal-directed behaviour (e.g., Taylor et al. 2009). Contributions from research informed by criminology, which conceptualise piracy

as criminal behaviour and utilise frameworks such as deterrence theory (Ehrlich 1973) and self-control theory (Gottfredson and Hirschi 1990) indicates that perceived risks also influence piracy behaviours (Pryor et al. 2008), along with self-control and associations with pirating peers (Higgins 2005).

Business-oriented traditions have also been influential in piracy research. Research informed business ethics and employing frameworks such as the model of ethical reasoning (Hunt and Vitell 1986), has demonstrated that ethical judgements and certain moral intensity variables including the magnitude of consequences are related to piracy behaviours (e.g., Gopal et al. 2004). Investigations focusing marketing-relevant characteristics, such as market conditions and product attributes also contribute to our understanding of piracy. Considerations of price and perceived value have been found to be related to piracy intentions (Chen et al. 2008). Moreover, price and risk are important variables in determining and the ratio of songs acquired by piracy to those purchased legally (Sandulli 2007).

A brief review of the extant literature on digital piracy goes some way to identifying its antecedents and reveals that a broad variety of factors influence piracy behaviours, including social, legal, ethical, and price considerations. However, as noted earlier, this body of research is limited in two important ways: it is fragmented and it has decontextualised digital piracy.

Fragmentation has occurred as researchers have adopted various theories and models from other disciplines and applied them to study digital piracy by focusing on differing sets of variables. The result has been that separate streams of piracy research have emerged, centring on theories and models from the research disciplines mentioned earlier (e.g., social psychology, criminology, and business ethics). Each stream has revealed important insights into the antecedents of digital piracy, but also omitted important variables necessary to understand the phenomenon covered in the other streams. Currently, it is difficult to identify which elements of the different streams are the strongest determinants of piracy behaviours. For example, is it the opinions of significant others (i.e., social norms), the severity of punishment if caught pirating, or the price of legal alternatives that influences piracy behaviours the most?

In terms of decontextualisation, apart from a few exceptions (e.g., Pryor, Dalenberg, McCorkle, Reardon, & Wicks, 2008; Sandulli, 2007) and regardless of the research stream, most investigations have not evaluated alternatives to digital piracy. Collectively, this body of research has focused on piracy in isolation and not studied how this behaviour occurs in relation to legal acquisition modes available to the user. By not investigating how legal alternatives are considered in comparison to piracy, this practice has limited our understanding of digital piracy itself. We still do not know why an individual chooses to pirate a product rather than acquire it legally.

In the next section we present a model that draws on the research outlined above, seeking to integrate the various research streams and contextualise piracy by looking at how it occurs in comparison to legal alternatives.

3 PROPOSED MODEL

In the proposed model (Figure 1, below), digital piracy is conceptualised as just one option in the user decision about how to acquire a digital product. As noted above, we integrate elements of theories and models from a variety of disciplines in order to model the multiple factors thought to influence an individual's acquisition decision for a digital product. Bettman, Luce and Payne's (1998) choice goals framework, which suggests that consumers engage in decision-making to achieve some sort of goal, serves to integrate the various elements in the model, which are grouped according to the way they are theorised to affect decisions. In the model, each of the peripheral boxes relates to a set of goals that the user is trying to satisfy during his or her acquisition decision. The importance of each goal to the user effectively dictates the influence of the related consideration on his or her acquisition decision, such that more important goals will have more influence over the user's decision. For example, if obtaining a product for less than his or her reference price is most important to a user, then the price perception will have the strongest influence over his or her acquisition decision.

The model is designed to represent user decisions and behaviour in situations where a user already knows about a specific product (e.g., a film or a song) and decides how to acquire it (i.e., legally or via piracy). We propose that the user's acquisition behaviour is primarily determined by his or her acquisition decision. This notion, that behaviour is determined by the user's decision, is common in consumer behaviour research (e.g., Bettman et al. 1998; Thaler 1985). In contrast, models from social psychology focus on intentions to perform a behaviour in binary choice situations (i.e., to do something or not). When examining binary choice situations, it is appropriate to examine the intention to do something, as the intention not to do something is implied. However, when examining decisions with more than two options, simply looking at the intention to engage in one option is not appropriate. For example, if we look at the intention to pirate a song, if the intention is low we do not know if it is because the individual intends to acquire it legally or not acquire it. Here, because there is no single implied alternative, it is necessary to examine the relationships between the various factors that are evaluated and options available to users. Moreover, as noted by Ajzen (1985, p. 22) "it may be neither feasible nor of much practical value to measure the intention in close temporal proximity of the behaviour." Thus, intentions are not included in the proposed model because the decision is not a binary choice, but a choice among options, and because the behaviour typically occurs quickly after a decision is made. Nonetheless, to support the model outlined below we draw on existing findings from investigations that have used intention frameworks to examine piracy behaviour. When drawing upon these findings we take the view that intentions are choices with a degree of commitment, and that existing evidence provides support for the relationship between a factor and an option available to users. For example, evidence demonstrating a positive relationship between ethical judgements in favour of piracy and piracy intentions is interpreted as evidence in support of the relationship between ethical judgements and the decision to acquire by piracy rather than legal acquisition or non-acquisition.

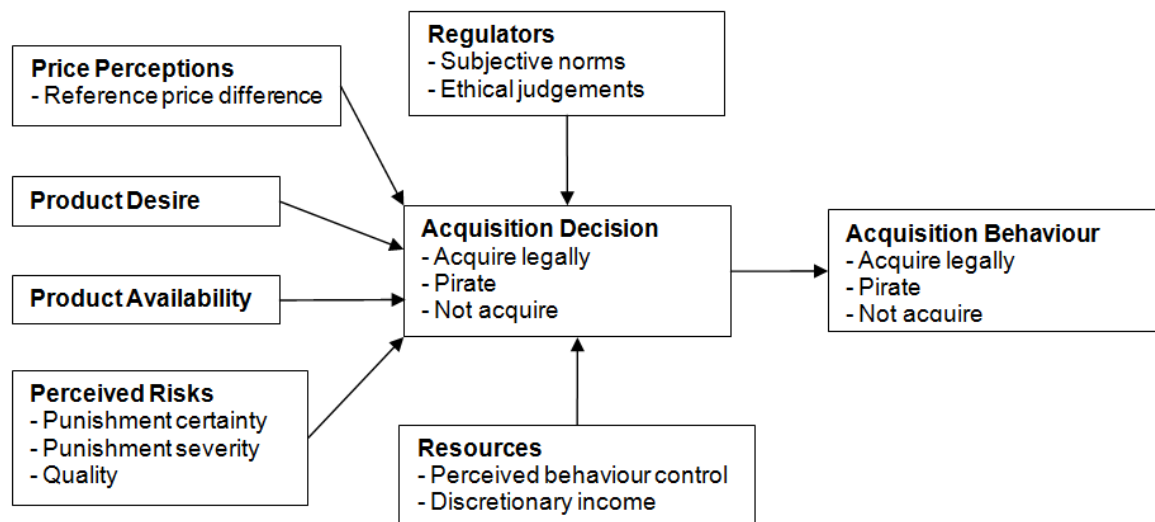


Figure 1. A Model of Digital Product Acquisition

As noted above, the acquisition decision is influenced by a variety of factors. To capture the influence of social considerations, our model includes desire, social norms and perceived behavioural control from Perugini and Bagozzi's (2001) model of goal directed behaviour. Concerning ethical considerations, we incorporate ethical judgement from Hunt and Vitell's (1986) general theory of marketing ethics. Representing legal considerations, we include risks related to illegal activity – punishment certainty and punishment severity – from Becker's (1968) economic theory of crime. To capture the influence of economic considerations, we include the concept of price perceptions – the difference between expected and reference prices – from Thaler's (1985) mental accounting. Moreover, using concepts from consumer behaviour, we include the concept of performance risk from Jacoby and Kaplan's (1972) typology of consumer risks to address concerns about product quality. Finally, in order to incorporate situation-related variables, we include product availability and

discretionary income. In the model these factors are grouped into six categories according to how they were originally theorised to influence the decisions. The categories are as follows: product desire, price perceptions (reference price difference), regulators (subjective norms and ethical judgement), perceived risks (punishment certainty, punishment severity, and quality), resources (perceived behavioural control and discretionary income) and product availability. The remainder of the section elaborates on each element of the model.

3.1 Product Desire

Product desire is identified as the primary motivation to acquire a product, a contention which has both theoretical and empirical support. Desires drive intentions to act in the model of goal-directed behaviour (Perugini and Bagozzi 2001), where desires are treated as general, reflecting beliefs about the outcomes of behaviour. Using MGDB as a framework for their investigation of music and film piracy in the US, Taylor et al. (2009) found that piracy intentions were positively associated with product desire. Ouellet (2007), using a sample from Canada, found that the desire to re-experience a piece of music was positively related to decision to acquire it, but subsequent to this decision, only positive evaluations of the piece's performer(s) were related to the purchase of that piece of music rather than acquiring it using piracy. In the proposed model product desire captures the individual's motivation to acquire a specific digital product. Thus, we propose:

Proposition¹: Product desire is positively associated with the decision to acquire the product.

3.2 Price Perception

Considerations of price play an important role in many models of consumer behaviour, and reference price in particular. "The concept of a reference price is that it is an internal standard against which observed prices are compared.... individuals make judgments and choices based on the comparison of observed phenomena to an internal reference point" (Kalyanaram and Winer 1995, p. 161). We focus on price perceptions, an evaluation of the positive or negative difference between one's reference price for a product and its expected price. This conceptualisation of price perceptions is similar to Thaler's (1985) concept of transaction utility. While price perceptions, according to our conceptualisation, have not been investigated in relation to piracy, prices have. Researchers such as Bhattacharjee, Gopal and Sanders (2003) have focused on the influence of price on Internet piracy, finding that price increases are positively related to piracy behaviours in a US sample. Among peer-to-peer (p2p) users in Spain, the price of CDs has been found to be positively related to the proportion of p2p songs illegally downloaded relative to the number of albums purchased legally (Sandulli 2007). Though these findings are not specifically related to price perceptions, a price increase typically moves the price of a product further from a user's reference price, and thus makes it less likely that a user will choose to pay for it. Thus, we propose:

Proposition²: Favourable price perceptions are negatively associated with the decision to pirate a digital product.

3.3 Perceived Risks

Digital piracy typically involves some degree of risk. Generally, two broad categories of risk can be associated with piracy: that associated with the consumption of the product and that associated with the acquisition mode. Our knowledge of consumption risk comes from Jacoby and Kaplan (1972), who identified five types of risk: financial, performance, physical, social and psychological risk. Physical risks are not relevant for digital products. However, performance risk, termed quality risk in the model, is especially important as digital products acquired through piracy may be of lower quality than originals and viruses can cause problems with the operating systems of physical devices. The influences of financial, social and psychological risks are also important, though are captured in the model by the contributions of price perceptions, social norms, and ethical judgement (discussed above and below, respectively). Our understanding of how individuals respond to the perceived risk associated with illegal activities comes from criminology. Becker's (1968) economic theory of crime

posits that criminal activities are inversely related to an individual's perception of the probability of arrest (punishment certainty) and the likely punishment if apprehended (punishment severity). In the case of digital piracy, these risks can also come from companies who seek to identify users who pirate digital products and seek compensation for copyright infringement. Evidence that considerations of risk are related to acquisition decisions can be found in the existing literature. Chiou, Huang, and Lee (2005) found in Taiwan that perceived punishment certainty and punishment severity were negatively associated with digital music piracy behaviours. Moreover, Pryor et al. (2008) found in a US sample that the perceived punishment certainty was negatively associated with the likelihood of an individual's previous music acquisition being illegal. Thus, we propose:

Proposition³: Perceived (a) quality risks and punishment (b) severity and (c) certainty associated with digital piracy are negatively associated with the decision to pirate a digital product.

3.4 Regulators

In addition to perceptions of external constraints faced by individuals, internal regulators of behaviour are also likely to impact the mode chosen to acquire digital products, specifically, subjective norms and ethical judgements. A key component in the model of goal-directed behaviour (Perugini and Bagozzi 2001) is subjective norms, which are an individual's perception of the social pressures to perform or not perform a behaviour. The influence of social norms has often been examined by researchers in relation to digital piracy and have been found to be related to piracy intentions in investigations into music in Canada (d'Astous et al. 2005) and digital products in general in the US (Al-Rafee and Cronan 2006). However, there have also been cases where subjective norms were not related to piracy intentions in samples from the US (Cronan and Al-Rafee 2008; Peace and Galletta 1996). Thus, we propose:

Proposition⁴: Favourable subjective norms about piracy are positively associated with the decision to pirate a digital product.

Ethical judgements are also likely to influence acquisition decisions, as individuals are motivated to act in accordance with their ethical beliefs (Hunt and Vitell 2006). As digital piracy tends to be construed as unethical by investigators, a sizeable amount of research examines the influence of ethical judgements. Using a sample of Taiwanese high school and university students, Shang, Chen and Chen (2008) found that intentions to engage in p2p music piracy were positively related to positive ethical judgements of the behaviour. Similarly, Gopal (2004) found in a sample from the US that positive ethical judgements about music-sharing behaviours were positively related to attitudes towards sharing music, and that these attitudes were related to the money saved by the individual by downloading mp3s. Thus, we propose:

Proposition⁵: Ethical judgements in support of piracy are positively associated with the decision to pirate a digital product.

3.5 Resources

An individual's ability to utilise skills at his or her disposal are also likely to influence acquisition decisions, especially the knowledge and ability necessary to obtain digital products without paying for them. The variable of perceived behaviour control is an important component in the model of goal-directed behaviour (Perugini and Bagozzi 2001), where the user's perception of his or her ability to perform a behaviour is an important predictor of his or her intention to engage in it. As certain skills are necessary in order to obtain digital products without paying for them, individuals may consider whether or not they have the skills to conduct digital piracy when making acquisition decisions. Perceived behaviour control has been found to be related to piracy intentions in the investigations using the TPB framework noted earlier, such as the study by d'Astous et al. (2005) into music in Canada and studies into software piracy in Saudi Arabia by Al-Jabri et al. (1997) and in the US by Cronan et al. (2008). Thus, we propose the following:

Proposition⁶: Perceived behaviour control is positively associated with the decision to pirate a digital product.

Additionally, as legal acquisition of products typically involves purchasing them, then an individual's discretionary income will likely influence the method used to acquire them. The existing literature provides some evidence in support of the notion that resources influence acquisition decisions. However, evidence for the influence of income on acquisition behaviour used is mixed. Research by Pew Internet found that a higher proportion of individuals living in low income households downloaded music illegally than those in higher income households (Madden and Lenhart 2003). There is also some evidence that household income is negatively related to intentions to pirate music among US college students (Coyle et al. 2009; Sinha and Mandel 2008). Other investigators have found that income is negatively related to piracy in certain conditions. For example, Bhattacharjee et al. (2003) found that income was negatively related to piracy of unknown songs in a sample of college students in the US. The issue with the above research is that the authors looked at absolute income, rather than discretionary income, with is arguably more relevant, as digital products are often perceived as discretionary items purchased for entertainment. Thus, we propose the following:

Proposition⁷: Discretionary income is negatively associated with the decision to pirate a digital product.

3.6 Product Availability

While in most cases a user is faced with a choice between legal acquisition and piracy, there are often situations when legal options are not available. Due to differences in release dates across countries or instances of unauthorised versions of products appearing online before official release dates, a user may often not be able to obtain a copy of a product legally. For example, many individuals illegally obtain or stream the latest episodes of foreign television shows because they have not been shown in their country yet. This is also an issue for the music and film industries as well, where difficulties associated with copyrights and licensing content mean that international release dates are not synchronised. Thus, as legal and illegal availability is likely to influence acquisition decisions by determining acquisition options available, we propose:

Proposition⁸: The availability of legal alternatives is negatively associated with the decision to pirate a digital product.

3.7 Acquisition Decision

In the case of digital products, a user is faced with the decision among legal acquisition, piracy, and non-acquisition. As noted earlier, the notion that behaviour is determined by the user's decision is common in consumer behaviour research (e.g., Thaler 1985). We extend this notion to the context of digital product acquisition, and propose that the user's acquisition behaviour is primarily determined by his or her acquisition decision. For example, if a user decides to acquire a film using piracy, he or she is likely to do so. Thus, we propose:

Proposition⁹: The acquisition decision determines the acquisition behaviour.

4 DISCUSSION

This paper outlines a model of the user's digital product acquisition decision in the context of piracy, and in doing so, makes two contributions to the literature. Firstly, by drawing on a broad variety of disciplines, the model integrates a theoretically and empirically fragmented body of research. The model draws on Bettman et al.'s (1998) choice goals approach to consumer decision-making to integrate elements of previous models used in digital piracy research. These models include Perugini and Bagozzi's (2001) model of goal directed behaviour, Hunt and Vitell's (1986) general theory of marketing ethics, Becker's (1968) economic theory of crime, Thaler's (1985) mental accounting and Jacoby and Kaplan's (1972) typology of consumer risks. The value of mapping these factors in a model is that it provides a foundation for future research to evaluate how these different factors compete to influence the user's decision.

The second contribution is that the model contextualises the acquisition decision, looking not at piracy in isolation, but as a choice between legal acquisition and piracy. It thereby extends existing research focused on predicting piracy behaviour by examining how a choice is made among available options. While each of the variables in the model will likely influence which method an individual will choose and ultimately use to acquire a digital product, it is still unknown how these variables will interact and influence this decision.

An important characteristic of the model is that it focuses on the user's decision of how to acquire a digital product, and is not a general causal model for predicting piracy. Thus there are other characteristics, such as demographic factors (e.g., age, gender, and level of education, etc.) which may influence the acquisition decision. However, these characteristics are likely to be indirect influences on the decision, rather than direct. For example, there is some evidence to suggest that males engage in piracy more than females (e.g., Al-Rafee & Cronan, 2006; Gopal & Sanders, 1997). However, it is not the user's gender per se that likely influences his or her decision, but rather that gender influences other factors which directly influence the decision. Males are often more technically savvy when it comes to computers, which makes engaging in piracy easier for them. It is likely that males will have higher perceived behavioural control, and so may be more likely to choose to pirate as a result. In this situation, it is not the user's gender which determines the decision, but rather the factors that are the result of gender differences. While an examination of the indirect influences on the decision is worthwhile, an exploration of these is beyond the scope of the model for the time being.

4.1 Implications

Understanding the factors that influence acquisition decisions for digital products will become increasingly relevant to society as we further integrate digital goods and services into our lives. Knowledge of how users make trade-offs among different factors, such as price and risk, enables industries to, amongst other things, design pricing strategies which are attractive to users and thus help organisations succeed in the digital environment. Indeed, it has been suggested that the current rates of digital piracy represent the failure of the market to capitalise on the "numerous consumers with a very low willingness to pay but [whose] combined consumption would be valuable" (Towse 2005, p. 16). Others have concluded that piracy is often a "defensive and opportunistic consumer strategy applied in order to lessen perceived risk and prevent losses" (Gupta et al. 2004, p.268). As reference prices are likely to be lower than actual prices, firms should consider business models to capitalise on the demand for products from those unwilling to pay the given price. Indeed, this has already started to happen. At the recent Rethink Music conference in Boston, Mark Piibe, Executive Vice President of Digital Business Development at EMI said that his company was starting to 'optimise along the demand curve', serving different portions of the market appropriately with different pricing options. However, the implications of the model are not just relevant to designing the tastiest digital carrots to tempt consumers, but also about ensuring the industry has the right sticks to dissuade piracy. The research model involves factors such as risks and ethical beliefs, which may inform the development of appropriate deterrence strategies.

4.2 Future Research

In the framework described above, digital piracy is conceptualised as a method used to acquire digital products, and thus a form of consumer behaviour. In doing so, this paper offers an agenda for future empirical research on digital product acquisition. Nonetheless, no claim is made about the most appropriate method for investigating the propositions outlined above. While each part of the model can easily be operationalised and the propositions tested using quantitative techniques, it would also be appropriate to use qualitative methods.

Intended future research will use a quantitative daily diary study to evaluate the model. Daily diaries are part of a body of research methodologies called event-sampling methods, which aim to measure behaviour in its natural environment, rather than in a laboratory. To reduce recall bias, such methods encourage participants to record details of their own behaviour soon after it occurs. This methodology, which has its origins in social psychology, was initially developed as a means for evaluating the

impact of attachment styles and personality attributes on the interactions of individuals (e.g., Tidwell et al. 1996), but is an effective method for recording multiple instances of behaviour in field research. The more-stable factors of the model that are not product specific (e.g., perceived risks, regulators, skills etc.) will be measured before the daily-diary period, while values for the less-stable variables that are product specific (e.g., product desire, acquisition decision, acquisition behaviour) will be recorded by participants for each instance of digital product acquisition over a limited duration.

Additionally, semi-structured, qualitative scenario-based interviews will be used as well, where individuals will be encouraged to talk through hypothetical situations where they would acquire a digital product, and describe their decision-making process. Such methods, also referred to as think-aloud methods, have longed been used in social science research and are known to elicit rich and detailed data from individuals about their decision-making processes (van Someren et al. 1994).

5 CONCLUSION

As a form of consumer behaviour, digital piracy is just one method available to individuals to acquire digital products. This paper introduces a model for explaining and predicting the acquisition of digital products and draws on theoretical and empirical evidence to support it. In the model, the method used to acquire a digital product is the outcome of an acquisition decision, where an individual's decision of how to acquire a product is influenced by a broad variety of factors, including the desire for the product, perceptions of price, perceived risks of acquisition, internal regulators of behaviour, resources available, and product availability. Further research is needed in order to evaluate the propositions outlined in support of the model and aid our understanding of the factors that influence acquisition decisions. This knowledge will contribute to the development of business models which capitalise on individuals preferences.

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